1884MNRAS..45...54F

Approximate Elliptic Elements of Comet 1884 (*Barnard*).

By W. H. Finlay, B.A.

I computed a parabolic orbit for this comet in August, but was unable to represent the middle place satisfactorily. As a similar result was found in Europe, and as M. Stechert's ephemeris in *Astr. Nach.*, No. 2609, showed large discordances from my later observations, I have computed elliptic elements with the following result. The observations used, viz. July 27, August 22, and September 17, were corrected for parallax from the parabolic orbit. The approximations to Q were not carried as far as perhaps they should have been, but the approximation was quite close enough to show whether the comet was moving in an ellipse, and if so, to give a very fair value of the periodic time.

τ	August $16^{d}\cdot50950$ G.M.T.	
π	$306^{\circ}\ 3'\ 40''$	Mean Equinox and Elliptic 1884·0.
☊	$4\ 54\ \ 1$	
ι	$5\ 30\ 36$	
log. a	0·5017524	
ϕ	$36\ 34\ 31$	
μ	$627''\cdot159$	
Period	5·6615 years	

These elements leave a discordance $c-o$ in the middle place of $-8''$ *in longitude and* $-1''$ *in latitude.* The month of October, since the Moon drew away from the evening sky, has been completely clouded until last night, October 14, when I secured a fine comparison of the comet with Arg. Oeltz. 21151. This observation compared with the above elements gives the discordance ($c-o$).

$$d\alpha \cos \delta = -\ 5^{s}\cdot0$$

$$d\delta = -11''\cdot0$$

Royal Observatory,
Cape of Good Hope:
1884, *Oct.* 15.

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Errata in Vol. XLIII., No. 1, November 1882.

(*Communicated by the Astronomer Royal.*)

Observations of Comet a, 1882, *S.P. with the Transit Circle.*

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			h m s		h m s
May 12	Greenwich Mean Solar Time,	*for*	8 52 15	*read*	8 52 13
	R.A.	,,	0 14 19·68	,,	0 14 17·46
15	R.A.	,,	1 26 20·62	,,	1 26 19·51
19	Greenwich Mean Solar Time	,,	10 48 58	,,	10 49 0
	R.A.	,,	2 38 58·01	,,	2 38 59·06

The corrections on May 12 and 15 are owing to errors of computation in taking the means of the wires, the usual practice of neglecting the minutes and decades of seconds in the summation of the wires having been followed in this case, to which it is not applicable on account of the uncertainty of observation of the middle wire exceeding 1^s.

Observations of Comet c, 1884 (*Wolf*), *made at the Royal Observatory, Greenwich.*

(*Communicated by the Astronomer Royal.*)

The observations with the East or Sheepshanks Equatorial and the Lassell Reflector were made by taking transits over two cross-wires at right angles to each other, and each inclined 45° to the parallel of declination.

Observations of Comet c, 1884, *with the Transit Circle.*

1884.	Greenwich Mean Solar Time.	Observer.	R.A.	N.P.D. (corrected for Refraction and Parallax).
d	h m s		h m s	° ′ ″
Sept. 25	8 57 39	J. P.	21 17 57·74	69 49 14·21
27	8 51 9	L.	21 19 19·24	70 45 12·75
28	8 47 58	A. D.	21 20 4·16	71 13 55·99

September 25.—A very faint object, diffused at edges but slightly condensed towards centre. Object confused with illuminated wires. The observation of N.P.D. very rough, the horizontal wire being unilluminated.

September 27.—Extremely faint patch of light, brighter towards centre. Observation of N.P.D. not very good.

September 28.—Fairly bright in dark field with nucleus.

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